

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* BHASKAR SOMPALLI, CHUNXIN JI, SUSAN G. YAN,  
HUBERT A. GASTEIGER, and HIROSHI SHIMODA

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Appeal 2009-013428  
Application 11/475,381  
Technology Center 1700

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Decided: February 16, 2010

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Before EDWARD C. KIMLIN, PETER F. KRATZ, and  
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's continued rejection and refusal to allow claims 1-21, and 26. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' claimed invention is directed to a process for bonding a decal substrate and carrier film together using an ionic bonding layer that is formed by depositing a liquid bonding layer on the carrier film (Spec. 0016-0017). A catalyst layer can be deposited over the decal substrate (Spec. 0019).

Claims 1 and 26 are the sole independent claims on appeal. Claim 1 is illustrative and is reproduced below:

1. A process comprising:

depositing a liquid bonding layer comprising an ionomer and a solvent over a carrier film with the proviso that the liquid bonding layer does not include a catalyst;

placing a decal substrate over the liquid bonding layer and drying the liquid bonding layer to provide a solid bonding layer comprising the ionomer, and the solid bonding layer bonding the decal substrate and carrier film together, and depositing a catalyst layer over the decal substrate.

No prior art references are relied upon by the Examiner in rejecting the appealed claims.

The Examiner maintains the following grounds of rejection.<sup>1</sup>

Claims 1-21 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. Claims 1-21 and 26 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject

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<sup>1</sup> The Examiner withdrew prior art rejections pertaining to pending claims 23-26 (Ans. 2-3).

matter sought to be patented. We reverse the stated rejections substantially for the reasons set forth in Appellants' Brief and Reply Brief.<sup>2</sup>

## ISSUES

The principal issues are:

Has the Examiner reasonably established that rejected claims 1-21 and 26 are indefinite by asserting that "[t]he nature or structure of the catalyst or what is catalyzed is not taught in the claims" (Ans. 4); and/or that claims 1-21 lack written descriptive support because the claim limitation, "with the proviso that the liquid bonding layer does not include a catalyst" is conclusively asserted as not being described in the specification (claim 1; Ans. 3)?

## PRINCIPLES OF LAW

It is well settled that the burden of establishing a prima facie case of non-patentability resides with the Patent and Trademark Office (PTO). *See In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984).

35 U.S.C. § 112, second paragraph, provides that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." A claim is considered indefinite if it does not reasonably apprise

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<sup>2</sup> We shall primarily focus on independent claim 1 in deciding this appeal. This is because: (1) the negative limitation in question is found therein and claim 1 is the sole independent claim subject to the § 112, first paragraph rejection; and (2) claim 1 includes the term "catalyst", which is at issue with respect to the indefiniteness rejection and substantially the same issue pertains to the other independent claim, claim 26, which is also subject to the § 112, second paragraph rejection.

those skilled in the art of its scope. *Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991); *see also, In re Venezia*, 530 F.2d 956, 958 (CCPA 1976) (relevant inquiry under § 112, second paragraph, is whether the claims delineate to a skilled artisan the bounds of the invention).

The relevant inquiry under 35 U.S.C. § 112, second paragraph, is whether the claim language, as it would have been interpreted by one of ordinary skill in the art in light of Appellants' Specification and the prior art, sets out and circumscribes a particular area with a reasonable degree of precision and particularity. *See In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

In general, words used in a claim are accorded their ordinary and customary meaning. *Honeywell Int'l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 992 (Fed. Cir. 2007). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). In interpreting claim terms, we rely on the written description for guidance in ascertaining the scope and meaning of the claims. *See id.* at 1317.

The test for determining compliance with the written description requirement of 35 U.S.C. § 112, first paragraph is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the Specification for the claim language. *See Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991) and *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983).

It is the Examiner's burden to establish a prima facie case of non-patentability based on the written description requirement by presenting evidence or reasons establishing why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims. *In re Alton*, 76 F.3d 1168, 1175 (Fed. Cir. 1996).

When the original written description describes something within the scope of the claim, the Examiner must do more than point out the difference in scope. This is so because "that a claim may be broader than the specific embodiment disclosed in a specification is in itself of no moment." *In re Rasmussen*, 650 F.2d 1212, 1215 (CCPA 1981). There are instances in which a narrower disclosure can support broader claims. *Id.*

#### FINDINGS OF FACT

The Examiner states that "[t]he nature or structure of the catalyst or what is catalyzed is not taught in the claim. Applicant's specification only teaches a preferred species (paragraph 0020)." (Ans. 4).

The Examiner states that:

"Catalyst" is a broad term to mean any substance that may speed up a process. Thus, it is unclear from the claims as to what the nature or structure of the catalyst is, and furthermore, what is catalyzed.

Ans. 5.

The Examiner asserts that "[t]here is no specific teaching found in the specification of why a catalyst is not present in a liquid bonding layer" (Ans. 4).

The Specification provides embodiments wherein "[t]he liquid bonding layer 12 includes an ionomer and a solvent" (Spec. 0016 and 0021).

The Specification does not expressly state that a catalyst is present or, in the alternative, is not present in the liquid bonding layer (*see generally* Spec.).

The Specification provides, *inter alia*, that:

Referring now to FIG. 2, in one embodiment of the invention, before the solvent in the liquid bonding layer 12 evaporates, a decal substrate 14 is placed on the liquid bonding layer 12 under minimal or elevated compression. Thereafter, the solvent in the liquid bonding layer 12 is allowed to evaporate or is driven off using heat, for example from an oven or drying lamps. In one embodiment the liquid bonding layer 12 is dried at a temperature ranging from room temperature to 120° C, and preferable at 60-120° C.

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Referring now to FIG. 3, in one embodiment of the invention, after the solvent in the liquid bonding layer 12 has evaporated, a solid bonding layer 12', which includes an ionomer, holds the carrier film 10 and the decal substrate 14 together. In alternative embodiments of the invention, the solid bonding layer 12' may have a thickness ranging from 0.05-10 microns, 0.05-2 microns, 0.1-1 microns, or a thickness therebetween. A catalyst slurry layer 16 is deposited on the decal substrate 14 and is dried to produce a decal assembly 18 which includes the dried catalyst layer 16 attached to the decal substrate 14 bonded to the carrier film 10.

The catalyst layer preferably includes a group of finely, divided carbon particles supporting finely divided catalytic particles such as platinum and a proton conductive material intermingled with the particles. The proton conductive material may be an ionomer such as a perfluorinated sulfonic acid polymer. Preferred catalyst materials include metals such as platinum, platinum alloys and other catalyst known to those in the fuel cell art.

Spec. 0017, 0019, and 0020; *see also* Figs. 2 and 3.

## ANALYSIS

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner's characterization of the term "catalyst" as a broad term and the Examiner's assertion as to the lack of teaching of the particulars of the catalyst in the claim itself are noted; however, these statements have no readily apparent relationship to, much less establish, the indefiniteness of the claimed subject matter at issue here, as it would have been understood by one of ordinary skill in the art. After all, it is well settled that just because a term is broad, does not mean it is indefinite. *In re Gardner*, 427 F.2d 786, 788 (CCPA 1970); *In re Borkowski*, 422 F.2d 904, 908 (CCPA 1970). Moreover, the Examiner has not articulated why it is required that the claims, themselves, must teach details as to the nature of the "catalyst layer" recited as part of Appellants' claimed process. In this regard, we note that the rejection under § 112, second paragraph relates to the determinability of the scope of the rejected claims, no rejection having been furnished alleging, much more establishing, a lack of enablement of the claimed subject matter by the Application disclosure as filed (see, e.g., Spec. 0019 and 0020).

Simply put, the Examiner does not reasonably explain why the claim language, as it would have been interpreted by one of ordinary skill in the art in light of Appellants' Specification and the prior art, fails to set out and circumscribe a particular area with a reasonable degree of precision and particularity.

On this record, we reverse the stated rejection under the second paragraph of 35 U.S.C. § 112.

Rejection under 35 U.S.C. § 112, first paragraph

The Examiner's rejection falls short of establishing that the Specification, as filed, would not have conveyed, to an ordinarily skilled artisan, that Appellants were in possession of the claimed method. In the method of claim 1, which is representative of the rejected claims, a liquid bonding layer including ionomer and solvent, but not including a catalyst, is deposited on a carrier film; a decal substrate is placed there over; the bonding layer is dried to bond the decal substrate and the carrier film together; and a catalyst layer is deposited on the decal substrate. As evidenced by paragraphs sixteen through twenty of the Specification, the described embodiments of Appellants' process appear to reasonably convey to one of ordinary skill in the art that Appellants were in possession of such a process wherein a catalyst is not required to be present as part of a liquid bonding layer that is deposited.

The Examiner cites to *In re Johnson*, 558 F.2d 1008, 1019 (CCPA 1977) and to *Ex Parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd. mem.*, 738 F.2d 453 (Fed. Circ. 1984) as authority that allegedly sanctions the stated rejection under the first paragraph of 35 U.S.C. § 112. However, *Johnson* or *Grasselli* do not provide a per se rule providing that the addition of any negative limitation to a claim, which is not expressly set forth in an application disclosure as originally filed, automatically violates the written description requirement of the first paragraph of 35 U.S.C. § 112. Compare *Ex parte Parks*, 30 USPQ2d 1234, 1236-37 (BPAI 1994). This is because the written description requirement imposes a factual question which, of course, will turn on the facts of each case. See *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560-64 (Fed. Cir. 1991).



The Examiner argues to the effect that the Specification lacks an explicit disclosure of the negative limitation in question and does not teach why a catalyst is not present in the liquid bonding layer. However, the Examiner does not point to any persuasive factual evidence that substantiates or otherwise satisfactorily explains why the described embodiments in the Specification, which specify an ionomer and a solvent as part of the liquid bonding layer but do not specify a catalyst being present, would have been reasonably understood by an ordinarily skilled artisan as describing embodiments in Appellants' possession wherein a catalyst is required to be in the liquid bonding layer, rather than the contrary.

In the present case, we determine that the Examiner has not carried the burden of supplying a sufficient factual basis to support a conclusion that the negative limitation in question introduces a new concept into the present Application disclosure. *See In re Alton*, 76 F.3d at 1175; *see also In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) ("the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability").

Accordingly, we reverse this rejection for the reasons set forth by Appellants (App. Br. 6-11, Reply Br. 1-2).

### CONCLUSIONS

The Examiner has not discharged the initial burden of reasonably establishing that claims 1-21 and 26 fail to comply with the requirements of 35 U.S.C. § 112, second paragraph by characterizing the claim term,

“catalyst”, as being broad and/or by asserting the claims do not teach details on the nature or structure of the catalyst or on what is catalyzed therein.

The Examiner has not discharged the initial burden of reasonably establishing that claims 1-21 fail to comply with the written description requirement of 35 U.S.C. § 112, first paragraph by conclusively asserting that a process including a step of depositing a liquid bonding layer comprising an ionomer and a solvent, but without a catalyst therein, is not described in the Specification.

#### ORDER

The Examiner’s decision to reject claims 1-21 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement; and to reject claims 1-21 and 26 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter sought to be patented is reversed.

#### REVERSED

PL Initial:  
sld

Appeal 2009-013428  
Application 11/475,381

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